AN AVERAGE DAY'S WORK ON OHIO FARMS

F. L. Morison

Department of Rural Economics
Ohio State University
and
Ohio Agricultural Experiment Station

Mimeograph Bulletin No. 32

In cooperation with
The Ohio Teachers of Vocational Agriculture
and
The Division of Agricultural Education

Columbus, Ohio.
January, 1931.

An Average Day's Work on Ohio Farms

Introduction: The data contained herein were secured with the thought that they would be of value in several ways:

1. To show the average daily accomplishment with tools and crews of different sizes. This should enable the individual to calculate to what extent he might go in replacing some of his present equipment with newer or larger types in order to reduce costs. The higher the wages the more economical it becomes to use larger machines, provided the size of farm business justifies their purchase.

2. To furnish figures that will serve as a yard-stick by which the individual farmer may compare the efficiency of his work with the average of farmers in the same area.

3. To show the type of equipment and the methods used in different sections of the State.

4. To furnish information which will be of assistance in calculating labor costs for various farm crops produced with different types of equipment.

Source of data: The data were collected in the spring of 1930 by the Rural Economics Department thru the cooperation of 112 teachers in Departments of Vocational Agriculture. Schedules were sent to all schools having junior or senior students enrolled in agriculture, with the request that the records be filled out by the student and his father working together. A total of 744 records were returned. It is felt that the records so secured are as accurate on the whole as could have been gathered by any survey method.

In order to show the effect of different conditions of soil and topography the records were divided into four geographical groups. A larger number of groups might seem desirable but this would have reduced the statistical value of the averages so obtained. No data on average accomplishments are presented where fewer than 10 men reported using the method in question. Some general data for the farms furnishing the information are given below:

District	Farms reporting	Per cent using tractors	Averages for farms reporting		
			Size of farm	Crop area per farm	Size of fields
	No.		Acres	Acres	Acres
Northwestern	237	56.5	133	101	13.5
Southwestern	166	50.6	135	95	15.1
Northeastern	173	33.5	121	74	10.7
Southeastern	168	15.4	130	55	8.2
Total	744	40.6	130	83	12.0

Altho there is much similarity in the soils and topography of all of western Ohio, there are some apparent differences in the methods of doing work in the two western groups, especially as regards size of threshing and shredding crews and in hay-making machinery used. The northeastern section is one of heavier soils and smaller proportion of the farm area in crop land, while the southeastern area embraces the unglaciated, hill section with its large percentage of untillable land. Attention is called to the average size of crop fields in the different districts. The small irregular fields and the rough topography of the southeastern district account largely for the smaller amount of work done per day there in practically all field operations.

The map shows the four districts into which Ohio was divided and areas within these districts from which records were received.

The figures in the following tables show the number of farms reporting the various types and sizes of machines used and the average amount of work accomplished in a 10-hour day at each operation.

Seed-bed Operations

Operation and type of machine	Width of machine	Crew		No. of farms reporting				Acres covered per day			
		Men	Horses	N.W.	S.W.	N.E.	S.E.	N.W.	S.W.	N.E.	S.E.
Spring plowing:											
Walking plow	12 in.	1	2	36	26	56	71	1.72	1.76	1.78	1.41
do.	14 in.	1	2	43	27	54	57	1.83	1.83	1.82	1.55
do.	14 in.	1	3	32	10	5	4	2.09	2.15	---	---
Sulky plow	14 in.	1	3	88	58	53	26	2.23	2.31	2.22	2.08
do.	16 in	1	3	11	10	7	3	2.48	2.40	---	---
Gang plow	28 in	1	4	16	13	5	1	4.00	4.31	---	---
Tractor plow	28 in.	1	tractor	119	73	51	22	6.50	6.63	6.22	5.59
Fall plowing:											
Walking plow	12 in.	1	2	18	5	46	32	1.58	---	1.61	1.36
do.	14 in.	1	2	22	2	38	32	1.73	---	1.64	1.50
do.	14 in.	1	3	12	0	4	2	1.90	---	---	---
Sulky plow	14 in.	1	3	45	11	41	7	2.10	2.21	2.17	---
do.	16 in.	1	3	3	0	5	3	---	---	---	---
Gang plow	28 in.	1	4	10	1	3	0	4.00	---	---	---
Tractor plow	28 in.	1	tractor	74	13	42	14	6.34	6.39	5.74	5.50
Disking:											
Single disk	5 ft.	1	2	0	0	3	22	---	---	---	6.55
do.	6 ft.	1	2	13	4	19	37	7.61	---	8.00	7.11
do.	6 ft.	1	3	11	8	3	13	8.90	---	---	8.46
do.	7 ft.	1	2	11	3	1	8	8.45	---	---	---
Tandem disk	6 ft.	1	3	14	7	7	0	8.93	---	---	---
do.	6 ft.	1	4	10	15	1	1	9.44	9.53	---	---
do.	7 ft.	1	4	32	22	7	2	9.87	10.13	---	---
do.	8 ft.	1	4	25	15	8	3	11.04	10.54	---	---
do.	7 ft.	1	tractor	56	23	21	3	18.95	19.17	18.10	---
do.	8 ft.	1	tractor	33	38	21	4	20.21	19.94	18.95	---
do.	9 ft.	1	tractor	12	0	2	0	23.66	---	---	---
Two tools tandem:											
(Disk and spike-tooth	7 ft	1	tractor	30	11	5	5	18.67	17.91	---	---
or spring-tooth &	8 ft.	1	tractor	17	20	13	1	20.40	19.90	16.23	---
cultipacker; etc.)	9 ft.	1	tractor	10	0	0	0	23.30	---	---	---
Dragging:											
Plank drag	5 ft.	1	2	0	0	0	15	---	---	---	7.46
do.	6-7 ft.	1	2	17	5	5	30	10.58	---	---	8.50
do.	8-9 ft.	1	2	22	8	12	28	11.45	---	11.66	9.36
do.	8-9 ft.	1	3	16	18	6	5	13.31	12.67	---	---
do.	10 ft.	1	2	5	4	12	7	---	---	12.33	---
do.	10 ft.	1	3	10	15	9	4	15.10	14.47	---	---
do.	10 ft.	1	4	9	17	1	0	---	16.12	---	---
do.	12 ft.	1	4	2	30	1	0	---	19.13	---	---

Seed-bed Operations (continued)

Operation and type of machine	Width of machine	Crew Men	Crew Horses	No. of farms reporting N.W.	S.W.	N.E.	S.E.	Acres covered per day N.W.	S.W.	N.E.	S.E.
Harrowing:											
Spike tooth harrow	6-7 ft.	1	2	9	3	2	18	---	---	---	8.67
do.	6-7 ft.	1	3	12	4	0	0	10.67	---	---	---
do.	8-9 ft.	1	2	26	16	16	47	11.85	11.88	12.62	10.10
do.	8-9 ft.	1	3	21	10	11	1	13.20	13.90	13.54	---
do.	10 ft.	1	2	10	5	41	38	14.20	---	14.10	12.15
do.	10 ft.	1	3	38	27	23	20	15.50	15.66	15.39	14.65
do.	12 ft.	1	2	8	3	11	6	---	---	15.54	---
do.	12 ft.	1	3	15	10	18	3	17.86	17.81	17.28	---
do.	14 ft.	1	3	5	4	13	0	---	---	20.61	---
do.	14 ft.	1	4	12	0	3	0	22.60	---	---	---
Spring tooth harrow	6-7 ft.	1	2	13	9	22	14	8.00	---	7.41	7.85
do.	6-7 ft.	1	3	26	6	26	7	10.38	---	9.31	---
do.	8-9 ft.	1	3	10	9	22	0	12.20	---	11.77	---
Rolling:											
	7 ft.	1	2	25	24	15	3	13.28	13.50	11.80	---
	8 ft.	1	2	43	18	35	13	14.23	15.39	12.83	11.38
	9 ft.	1	2	14	7	14	3	15.90	---	14.50	---
	10 ft.	1	2	27	15	15	8	16.26	17.07	17.93	---
Cultipacking:											
	7 ft.	1	2	14	9	14	1	11.00	---	11.14	---
	8 ft.	1	2	24	11	10	7	12.30	12.54	12.25	---
	8 ft.	1	3	14	10	12	2	13.00	12.94	12.60	---
	9 ft.	1	2	19	4	4	2	13.42	---	---	---
	9 ft.	1	3	16	9	5	0	14.19	---	---	---
Spreading lime: *											
Lime spreader	8 ft.	1	2	5	0	7	15	---	---	---	6.87
do.	10 ft.	1	2	4	0	22	19	---	---	10.14	9.58
do.	12 ft.	1	2	1	1	10	3	---	---	11.67	---
Drilling fertilizer:											
Grain-fertilizer drill	6 ft.	1	2	13	5	10	30	10.00	---	8.60	8.66
do.	7 ft.	1	2	13	12	11	17	10.31	10.17	10.00	8.88
do.	8 ft.	1	2	3	14	10	15	---	11.71	12.20	9.20
do.	8 ft.	1	3	5	10	0	0	---	14.30	---	---
Haul and spread manure:								Loads per day			
Spread by hand	--	1	2	12	20	22	61	9.2	6.5	9.3	9.2
do.	--	2	2	9	15	15	57	---	11.7	14.2	12.2
With spreader	--	1	2	68	41	53	16	13.8	12.1	11.7	12.4
do.	--	2	2	111	66	66	29	21.3	18.8	17.7	18.8
do.	--	2	3	17	10	10	3	20.7	17.6	18.0	---

* Average application, 1.63 tons per acre.

Plowing: In spite of its inefficiency, the two-horse team continues to be an important source of power for plowing, especially in eastern Ohio. The tractor replaces horses to a large extent in fall plowing in the northwestern district. Fall plowing is not so common a practice in southwestern Ohio, wheat being disked in after corn more often there than in northern Ohio.

Disking: The average daily accomplishment for a 6-foot single disk and 3 horses in northwestern Ohio is 8.9 acres, once over. An 8-foot tandem disk drawn by 4 horses does a much more thorough job and covers about 25 per cent more land in a day. A tractor and a 7-or 8-foot disk accomplishes about 90 per cent more than 4 horses drawing a disk of the same size. Disking is more common in western than in eastern Ohio.

Cultivating corn: The one-row riding cultivator is the tool most used for corn cultivation over the whole State, tho the one-horse cultivator, covering only a half-row at a time, is used widely in the southeastern section. A man with a two-row riding cultivator drawn by 3 horses accomplishes nearly as much as two men each using one-row outfits; while the rotary hoe, drawn by two horses, covers nearly two and a half times as much in a day as a one-row walking cultivator and even more if the slower speed of going over the corn the first time with a cultivator is taken into account.

Cutting corn: Use of the corn binder was reported quite commonly in northwestern Ohio and in fact in all but the southeastern section. A crew of one man, with three horses to draw this implement, and two men setting up the shocks, accomplishes approximately as much as 5 men cutting and shocking by hand.

Husking corn: The data on husking are supplemented by some figures on rates of harvesting with the mechanical corn picker in 1928. Forty-six of the machines were one-row and eleven were two-row outfits. The farms from which these corn picker data were secured were located chiefly in the western half of Ohio.

Corn Operations

Operation and type of machine	Width of machine	Crew Men	Crew Horses	Farms reporting N.W.	Farms reporting S.W.	Farms reporting N.E.	Farms reporting S.E.	Acres covered per day N.W.	Acres covered per day S.W.	Acres covered per day N.E.	Acres covered per day S.E.
Planting corn:											
Hand planter	---	1	0	0	0	0	26	---	---	---	4.85
Check-row planter	2 rows	1	2	199	95	100	75	12.23	11.67	9.56	10.67
Drill planter	2 rows	1	2	87	84	85	58	13.83	12.76	11.54	11.19
Cultivating corn:											
1-horse cultivator	---	1	1	26	10	35	75	3.73	4.00	3.91	3.21
Walking cultivator	1 row	1	2	29	27	27	33	5.86	5.78	5.96	5.85
Riding cultivator	1 row	1	2	205	130	147	108	6.60	6.68	6.51	6.22
Riding cultivator	2 rows	1	3	40	38	9	1	13.52	12.66	---	---
Weeder	2 rows	1	1	8	8	26	9	---	---	12.35	---
Rotary hoe	2 rows	1	2	15	13	11	3	14.13	14.85	12.45	---
Tractor cultivator	2 rows	1	tractor	5	20	2	1	---	19.40	---	---
Cutting and shocking:											
By hand	---	1	0	126	88	104	137	1.46	1.49	1.43	1.37
Platform cutter	2 rows	2	1	29	8	8	3	4.79	---	---	---
Cutting corn:											
With binder	1 row	1	2	104	39	37	18	6.23	6.41	5.86	5.66
do.	1 row	1	3	40	39	41	10	7.07	6.94	6.73	6.70
do.	1 row	1	tractor	5	11	10	0	---	10.27	9.50	---
Shocking after binder:	---	1	0	44	17	24	6	4.14	4.47	3.66	---
do.	---	2	0	102	61	51	18	6.84	7.06	6.07	5.88
Filling silo(excluding field cutting) :	Av. all machines			36	26	43	25	68.2	66.0	61.9	53.7 T
Men in crew, av.	---	-	-	--	--	--	--	9	10	9	9
Horses used, av.	---	-	-	--	--	--	--	8	10	8	8
								Bushels per day			
Husk and crib corn from standing stalk:	---	1	2	58	38	18	16	58.1	58.7	50.0	51.4
do.	---	2	2	48	36	16	10	107.3	105.5	94.7	98.0
Husk corn from shock:	---	1	0	135	99	108	137	38.5	38.5	35.5	35.2
Cribbing corn:	---	1	2	66	57	49	70	165	164	154	133
do.	---	2	2	28	11	31	45	261	249	217	178
Av. size load	---	-	-	--	--	--	--	47	37	38	30
Husk and shred corn:											
Shredder	4 roll	-	-	37	18	19	10	298	322	301	291
Men in crew, av.	---	-	-	--	--	--	--	6	8	7	7
Horses used, av.	---	-	-	--	--	--	--	6	8	6	6
Shredder	6 roll	-	-	38	27	23	17	432	413	402	372
Men in crew, av.	---	-	-	--	--	--	--	8	10	8	8
Horses used, av.	---	-	-	--	--	--	--	8	10	8	8
Shredder	8 roll	-	-	29	16	0	0	537	542	--	--
Men in crew, av.	---	-	-	--	--	--	--	10	13	--	--
Horses used, av.	---	-	-	--	--	--	--	10	12	--	--

Harvest with mechanical picker: *	1 row, 3 men, tractor & 4 horses	6.7 A., av. 55 bu., in 8.4 hr
do.	2 row, 4 men, tractor & 4 or 6 horses	12.7 A., av. 55 bu., in 8.4 hr

*From Dept. of Rural Economics Mimeograph Bulletin No. 24, by J. H. Sitterley.

Small Grain Operations

Operation and type of machine	Width of machine	Crew Men	Crew Horses	Farms reporting N.W.	Farms reporting S.W.	Farms reporting N.E.	Farms reporting S.E.	Acres covered per day N.W.	Acres covered per day S.W.	Acres covered per day N.E.	Acres covered per day S.E.
Drilling grain:											
Fertilizer drill	6 ft.	1	2	47	19	60	54	9.26	8.90	8.95	8.24
do.	7 ft.	1	2	54	22	40	43	10.11	10.23	9.67	8.88
do.	7 ft.	1	3	24	30	2	0	11.04	11.77	---	---
do.	8 ft.	1	2	28	21	27	19	11.89	11.86	10.14	9.41
do.	8 ft.	1	3	7	15	3	2	---	12.60	---	---
Without fertilizer	6 ft.	1	2	38	6	11	18	10.05	---	9.09	8.77
do.	7 ft.	1	2	40	9	11	14	11.05	---	10.45	10.00
do.	7 ft.	1	3	11	4	0	0	12.54	---	---	---
do.	8 ft.	1	2	13	4	3	3	13.00	---	---	---
Cutting grain:											
Binder	6 ft.	1	2	13	0	6	10	8.23	---	---	7.90
do.	6 ft.	1	3	29	16	29	54	9.48	9.50	9.52	8.67
do.	7 ft.	1	3	77	63	70	31	11.15	11.43	10.25	10.16
do.	7 ft.	1	4	14	21	8	12	12.71	12.81	---	10.50
do.	7 ft.	1	tractor	31	16	16	8	16.26	16.38	14.81	---
do.	8 ft.	1	3	12	7	8	5	12.92	---	---	---
do.	8 ft.	1	4	29	12	7	2	14.76	13.83	---	---
do.	8 ft.	1	tractor	13	10	8	0	19.92	19.55	---	---
Shocking wheat:	---	1	0	169	124	143	123	7.08	6.65	7.50	6.52
Shocking oats:	---	1	0	206	114	140	101	7.56	7.46	7.66	6.94
Haul sheaves to barn or stack:		2	2	11	5	57	73	6.73	---	6.80	6.29
Threshing wheat:								Bushels per day			
From barn or stack	All machines	-	-	9	9	67	85	---	---	836	608
Men in crew, av.	---	-	-	--	--	--	--	11	10	8	10
From shock	22-26 in. cyl.	-	-	52	13	16	12	674	660	645	550
Men in crew, av.	---	-	-	--	--	--	--	12	11	10	12
Horses used, av.	---	-	-	--	--	--	--	10	10	8	8
From shock	28-30 in. cyl.	-	-	47	40	29	18	877	832	860	691
Men in crew, av.	---	-	-	--	--	--	--	14	14	12	12
Horses used, av.	---	-	-	--	--	--	--	12	12	10	10
From shock	32 in. & over	-	-	38	49	20	0	1158	1080	958	---
Men in crew, av.	---	-	-	--	--	--	--	17	16	14	---
Horses used, av.	---	-	-	--	--	--	--	14	14	12	---
Threshing oats:											
From barn or stack	All machines	-	-	9	7	53	66	--	--	1220	982
Men in crew, av.	---	-	-	--	--	--	--	11	9	8	10
From shock	22-26 in. cyl.	-	-	53	14	21	14	1159	1100	936	836
Men in crew, av.	---	-	-	--	--	--	--	12	12	10	12
Horses used, av.	---	-	-	--	--	--	--	10	10	8	8
From shock	28-30 in. cyl.	-	-	51	33	25	12	1539	1344	1310	1133
Men in crew, av.	---	-	-	--	--	--	--	14	14	12	12
Horses used, av.	---	-	-	--	--	--	--	12	12	10	10
From shock	32 in. and over			59	35	22	0	1980	1654	1505	---
Men in crew, av.	---	-	-	--	--	--	--	17	16	13	---
Horses used, av.	---	-	-	--	--	--	--	14	14	12	---

Harvesting with combine* 10 ft. 2 men-tractor (plus 1 man & 2 teams or truck) 1.79 A. per hour.

* From Dept. of Rural Economics Mimeograph Bulletin No. 18 by J. H. Sitterley.

Cutting small grains: Several different combinations of sizes of grain binders and sources of power were reported for this operation, especially in the northwestern district. An examination of the western Ohio figures on cutting grain reveals that the average daily accomplishment for two-horse teams is a little less than 1.4 acres for each foot of cut, for three-horse teams approximately 1.6 acres per foot, and for four-horse teams 1.8 acres per foot of cut. The 7-foot binder drawn by 3 horses is the unit most frequently used, except in the southeastern district where the 6 ft. outfit is most common.

Threshing: In eastern Ohio, and especially the southeastern part, threshing from the barn or stack is a common practice; this method is seldom used in western Ohio. Small sized separators were reported in relatively larger numbers in northwestern Ohio than in the southwestern part. In threshing from the shock the unweighted average daily accomplishment of small, medium and large size separators is found to be as follows: 60, 64 and 68 bushels of wheat, respectively, for each man in the crew, or 94, 105 and 112 bushels of oats per man. (The hill section figures are not included in these averages, none of the large outfits having been reported in that section).

Loading and unloading hay: Data were not secured on size of loads hauled, but common observation is that loads pitched on by hand are smaller on the average than those put on with a loader, and those in the hill section are not generally as large as those in the northwestern section. The side-delivery rake and the hay loader are confined largely to the northern half of the State.

Hay Operations

Operation and type of machine	Width of machine	Crew		Farms reporting				Acres covered per day			
		Men	Horses	N.W.	S.W.	N.E.	S.E.	N.W.	S.W.	N.E.	S.E.
Sowing grass seed:											
Knapsack seeder	Av. 14.8 ft.	1	0	99	93	92	76	24.00	27.73	26.98	23.05
Cutting hay:											
Mower	5 ft.	1	2	66	69	68	106	8.67	8.32	7.85	7.45
do.	6 ft.	1	2	144	66	72	38	10.12	9.94	9.59	8.58
Tedding hay:											
Tedder	6 ft.	1	2	17	6	7	5	12.35	---	---	---
do.	8 ft.	1	2	28	7	21	13	14.39	---	13.48	13.00
do.	10 ft.	1	2	38	22	43	22	17.26	17.62	18.12	15.09
do.	12 ft.	1	2	10	10	5	0	19.87	20.44	---	---
Raking hay:											
Sulky rake	---	1	1	22	32	4	8	13.55	15.03	---	---
do.	---	1	2	23	54	27	108	15.26	16.30	15.93	15.85
Side delivery rake	---	1	2	101	18	100	23	16.04	17.44	15.77	15.43
Cocking hay:	---	1	0	16	11	7	67	4.87	4.81	---	3.50
Loading and unloading:								Loads per day			
Load and unload by hand		2	2	7	13	12	38	---	5.73	6.25	6.31
do.	---	3	2	5	11	5	16	---	6.23	---	7.93
Load by hand, unload with fork	---	2	2	22	11	14	49	6.36	6.55	7.07	8.08
do.	---	3	2	13	40	10	36	8.07	7.45	8.11	8.47
Load with loader, unload with fork	---	2	2	54	11	37	10	7.92	7.27	8.32	7.84
do.	---	2	3	12	0	5	7	8.43	---	---	---
do.	---	3	2	40	8	28	10	9.25	8.20	8.75	8.44
do.	---	3	3	8	6	10	7	---	---	8.90	---
do.	---	3	4	17	9	10	6	9.76	9.80	10.20	---
do.	---	4-6	4-6	15	18	6	1	14.33	13.00	---	---
Load with loader, unload with slings	---	2	2	33	0	19	0	8.18	---	8.84	---
do.	---	3	2	10	0	4	0	9.70	---	---	---
Baling from stack or barn:								Tons per day			
Power baler	---	6	tractor	31	8	11	19	20.5	---	24.0	20.3

Potato Operations

Operation and type of machine	Crew		Farms reporting				Acres covered per day			
	Men	Horses	N.W.	S.W.	N.E.	S.E.	N.W.	S.W.	N.E.	S.E.
Treating seed potatoes:	1	0	30	13	20	30	50.7	53.2	54.6	43.1bu.
Cutting seed pieces:	1	0	91	64	111	109	17.8	17.2	20.3	15.6bu.
Mark out rows:	1	1	22	19	8	72	5.18	5.58	---	4.85
do.	2	1	16	6	8	20	6.00	---	---	5.55
Planting potatoes:										
By hand	1	0	28	23	18	56	1.36	1.17	1.33	1.39
do.	2	0	17	16	13	48	2.53	2.25	2.54	2.00
With planter	1	2	21	17	27	3	4.38	4.35	4.15	---
do.	2	2	29	13	63	8	5.13	4.23	4.83	---
Covering potatoes:										
With hoe	1	0	0	4	1	22	---	---	---	1.23
With plow	1	1	25	13	10	53	3.88	4.46	3.00	3.51
do.	1	2	11	5	8	19	5.18	---	---	4.90
do.	2	1	12	5	5	6	5.00	---	---	---
Cultivating:										
With cultivator	1	1	17	23	23	80	3.94	4.37	4.00	3.30
do.	1	2	84	41	84	37	6.17	5.63	6.56	5.27
With weeder	1	1	7	1	29	0	---	---	12.45	---
Hoeing:	1	0	59	35	49	94	1.32	1.24	1.32	1.21
Dusting:	1	0	10	10	14	19	4.20	4.05	4.36	4.21
Digging potatoes: *										
By hand	1	0	16	16	19	49	.30	.30	.35	.27
With plow	1	1	4	10	4	12	---	1.18	---	1.29
do.	1	2	30	13	22	38	1.61	1.55	1.71	1.66
do.	2	2	15	18	17	27	1.78	1.92	2.38	2.00
With digger	1	2	14	9	36	3	2.38	---	2.29	---
do.	1	4	11	0	10	0	3.92	---	3.09	---
							Bushels per day			
Picking up:	1	0	85	56	109	105	62	57	71	55
Hauling to barn:	1	2	18	10	38	24	244	277	279	215
do.	2	2	35	14	42	28	380	430	425	312
Grading:										
By hand	1	0	14	15	32	35	93	86	98	55

* Average yields per acre on farms reporting were approximately 145 bushels.

Man Labor Used in Producing Corn in Northwestern Ohio

(with yield of 55 bushels per acre)

Operation	Equipment	Horses	Times over	Total man hours per acre
I. With small units of horse-drawn equipment:				
Plowing	12 in. walking plow	2	1	5.81
Disking	6 ft. single disk	2	2	2.63
Harrowing	9 ft. spike tooth	2	1	.84
do.	6 ft. spring tooth	2	1	1.25
Cultipacking	7 ft. cultipacker	2	1	.91
Planting	Check row planter	2	1	.82
Cultivating	1-row walking cultivator	2	3	5.12
Husk and crib from standing stalk (2 men)		2	-	10.25
			Total	27.63
II. With larger units of horse-drawn equipment:				
Plowing	16 in. sulky plow	3	1	4.03
Disking	8 ft. tandem disk	4	1	.91
Harrowing	14 ft. spike tooth	4	1	.44
do.	9 ft. spring tooth	3	1	.82
Cultipacking	9 ft. cultipacker	3	1	.70
Planting	Check row planter	2	1	.82
Cultivating	2-row riding cultivator	3	3	2.22
Husk and crib from standing stalk (2 men)		2	-	10.25
			Total	20.19
III. With tractor-drawn equipment (except planter):				
Plowing	2-bottom tractor plow	-	1	1.54
Disk and spike tooth harrow	8 ft. width	-	1	.49
Spring tooth and cultipacker	9 ft. width	-	1	.43
Planting	Check row planter	2	1	.82
Cultivating	2-row tractor cultivator	-	3	1.55
Harvest with 2-row picker, tractor (4 men)		4	-	2.65
			Total	7.48

The above table, showing hours of man labor used in producing an acre of corn with different types of equipment, is given as an example of one of the kinds of information that may be derived from the data in the foregoing tables.

The methods of seed-bed preparation and the number of cultivations correspond with those found in a group of farms keeping cost records in

Putnam county. It will be noted that the same amount of seed-bed preparation is accounted for in all three systems. The amount of man labor in the third system might be further reduced if a three-plow tractor were used, with a small harrow or some other tillage tool to work down the freshly plowed ground. Not one of the farms reported planting corn with a tractor. A further reduction would be made possible by doing the first cultivation with a tractor drawing two rotary hoes abreast, a unit capable of covering 40 acres or more per day.